



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicant : Tomoyuki Ohzeki
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PHOTOHERMOGRAPHIC MATERIAL

DECLARATION UNDER 37 C.F.R. §1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA22313-1450

Sir:

I, Tomoyuki Ohzeki, hereby declare and state:

THAT I am a citizen of Japan;

THAT I have received a Master's Degree in Engineering in March 1988 from
Waseda University, Faculty of Science and Engineering;

THAT I have been employed by Fuji Photo Film Co., Ltd. since April 1988,
where I have been engaged in research and development of silver halide photosensitive
materials and since 1998, photothermographic materials.

The following additional comments and experiments have been declared and conducted by me.

ADDITIONAL EXPERIMENTS

This is a comparative test of 3-phenyl-pyrazolidone to a compound having an adsorptive group to silver halide and a reducing group in an image forming layer.

<Preparation of samples of photothermographic material>

Sample Nos. 3, 5, 7, 11, 13, 15 are samples in Example 1 of the present specification.

Sample Nos. A, B, C are comparative samples, and were prepared in a similar manner in that of Sample Nos. 11, 13, 15 in Example 1 of the present specification except that the compounds (19) and (71) in the image forming layer were changed to 1-phenyl-3-pyrazolidone at the same coating amount with respect to a total molar amount of the compounds (19) and (71). Sample Nos. D, E of the present invention and comparative sample No. F were prepared in a similar manner to that of Sample Nos. 11, 13, 15 in Experiment 1, respectively, except that the compounds (19) and (71) in the image forming layer were changed to compound (71) at same coating amount with respect to a total molar amount of the compounds (19) and (71).

< Evaluation and results>

These photothermographic material samples were exposed, thermally developed and evaluated in the same manner as recited in Example 1 of the present specification.

A sensitivity of sample 1 (not indicated in Table A) in Example 1 of the present specification is set to 100, and relative sensitivity value based on the sensitivity of sample 1 was shown for present samples. The obtained results are shown in the following Table A.

Table A

Sample No.	Silver halide emulsion		Compound having adsorptive group and reducible group	Silver salt of fatty acid		Binder (Tg)	Photographic Property		Dark stability (Δ Dmin)	Remarks
	No.	Silver iodide content (mol%)		No.	Silver behenate content (mol%)		Sensitivity	Fog		
3	1	100	-	B	54 mol%	PVB(67°C)	95	0.18	0.03	Comparative
5	1	100	-	C	60 mol%	PVB(67°C)	90	0.18	0.02	Comparative
7	1	100	-	D	90 mol%	PVB(67°C)	65	0.18	0.02	Comparative
11	1	100	(19) and (71)	B	54 mol%	PVB(67°C)	190	0.19	0.03	Inventive
13	1	100	(19) and (71)	C	60 mol%	PVB(67°C)	170	0.19	0.02	Inventive
15	1	100	(19) and (71)	D	90 mol%	PVB(67°C)	110	0.19	0.02	Comparative
A	1	100	1-phenyl-3-pyrazolidone	B	54 mol%	PVB(67°C)	98	0.21	0.09	Comparative
B	1	100	1-phenyl-3-pyrazolidone	C	60 mol%	PVB(67°C)	88	0.23	0.08	Comparative
C	1	100	1-phenyl-3-pyrazolidone	D	90 mol%	PVB(67°C)	64	0.22	0.06	Comparative
D	1	100	(71)	B	54 mol%	PVB(67°C)	151	0.19	0.03	Inventive
E	1	100	(71)	C	60 mol%	PVB(67°C)	135	0.18	0.02	Inventive
F	1	100	(71)	D	90 mol%	PVB(67°C)	87	0.19	0.02	Comparative

By comparing sample Nos. 11, 13 with sample Nos. 3, 5, or sample Nos. D and E with sample Nos. 3, 5, respectively, sample Nos. 11, 13, D and E of the present invention resulted in high sensitivity while maintaining low fog and excellent image stability. In contrast, by comparing sample Nos. A, B, C with sample Nos. 3, 5, 7, respectively, comparative sample Nos. A, B, C resulted in no increase of sensitivity, but in increase of fog and degradation in image stability. Comparative sample Nos. 15 and F, which contain silver behenate at 90 mol%, resulted in smaller increase of sensitivity in spite of the existence of compound (19) and (71), or (71).

It is clearly understood that 1-phenyl-3-pyrazolidone as a molecule has no effect of the compound having an adsorptive group to silver halide and a 3-pyrazolidone group as a reducing group in a molecule.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: *June 8, 2007*

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